Original Article

A study of the factors associated with recurrence of pilonidal sinus at tertiary health care centers

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Abstract

Introduction: Pilonidal sinus disease (PSD), diagnosed by the penetration of hair follicles into one or more sinus walls, attacks younger subjects more frequently and chronically develops with acute and sub acute instances of infection **Aims and Objectives:** To Study the Factors associated with recurrence of pilonidal sinus at tertiary health care center. **Methodology:** This was a hospital based study cross-sectional study carried out at the General Surgery Department of Bidar Institute of Science during the one year period i.e. January 2014-January 2015. All the patients Diagnosed as Pilonidal sinus were studied in Detail clinical history regarding risk factors was asked and those persons who did not give consent and terminally ill were excluded from the study. The statistical analysis done by Z-test (Difference between two Proportions) **Result:** Majority of the Patients were in the Age group of >50 i.e. 40.00%, followed by 40-50- 30.00% 30-40- 20.00%, 20-30- 6.66%, 10-20- 3.33%. Majority of the patients were Male i.e. 70.00% and Females were 30.00%. The majority of the Patients associated significantly with Risk factors were; Old age i.e. 66.67 %(Z=5.85, p<0.05. HS) followed by Male sex 70.00% (Z=6.78, p<0.05. HS) H/o Smoking 60.00% (Z=5.28, p<0.05.HS), H/o Diabetes 56.66% (Z=6.1, p<0.05.HS), Obese (BMI>30) 80.00% (Z=5.5, p< 0.05. NS), Wound Infection 63.33% (Z=6.4, p<0.05.HS)Familial Tendencies 73.33% (Z=4.5,p<0.05.HS)Multiple sinus number 83.33% (Z=4.49,p<0.05.HS) **Conclusion :** Risk factors mostly associated with recurrence of pilonidal sinus in our study were Old age, Male sex, H/o Smoking, H/o Diabetes, Obese (BMI>30), Wound Infection Familial Tendencies, Multiple sinus number.

Keywords: Pilonidal sinus, Familial Tendencies, Wound Infection.

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INTRODUCTION

Pilonidal sinus disease (PSD), diagnosed by the penetration of hair follicles into one or more sinus walls, attacks younger subjects more frequently and chronically develops with acute and subacute instances of infection.[1] Frequently seen in the midline of the sacrococcygeal region,[1] it limits the patient's lifestyle and results in loss of productive power.[2] For treatment, various noninvasive[3] and surgical methods (simple incision and drainage, lying open, marsupialization, excision and primary closure, or rhomboid excision and Limberg flap) have been performed.[4–6] Pilonidal sinus disease is a common condition usually seen in young adults. The estimated incidence is 26 per 100 000 people affecting men twice as often as women[7,8]. Aetiology is uncertain but relates to the implantation of loose hair into the depth of natal crease. Other factors associated are increased sweating with sitting and friction, poor personal hygiene, obesity, local trauma, narrowness of natal cleft, etc[9,10]. Implantation of hair leads to infection and abscess formation later leading to discharging sinus. There has been a debate regarding the best treatment for pilonidal diseases for many years. An ideal operation should be simple, should not need prolonged hospital stay, should have low recurrence rate, and should be associated with minimal pain, wound care and decrease the patient's time off-work[11].

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MATERIAL AND MENTHODS

This was a hospital based study cross-sectional study carried out at the General Surgery Department of Bidar Institute of Science during the one year period i.e. January 2014-January 2015. All the patients Diagnosed as Pilonidal sinus were studied in Detail clinical history regarding risk factors was asked and those persons who did not give consent and terminally ill were excluded from the study. The statistical analysis done by Z-test (Difference between two Proportions)

RESULT

Table 1: Age wise Distribution of the Patients of Pilonidal Sinus

Age	No.	Percentage (%)
10-20	1	3.33%
20-30	2	6.66%
30-40	6	20.00%
40-50	9	30.00%
>50	12	40.00%
Total	**30**	**100.00%**

Majority of the Patients were in the Age group of >50 i.e. 40.00%, followed by 40-50- 30.00% 30-40- 20.00%, 20-30- 6.66%, 10-20- 3.33%.

Table 2: Gender wise Distribution of the Patients with Pilonidal sinus

Sex	No.	Percentage (%)
Male	21	70.00%
Female	9	30.00%
Total	**40**	**100.00%**

Majority of the patients were Male i.e. 70.00% and Females were 30.00%.

Table 3: Distribution of the Patients as per the Various Associated Risk factors

Risk Factors	Present		Absent		P-value
Old age	20	66.67%	10	33.33%	Z=5.85, p<0.05. HS
Male sex	21	70.00%	9	30.00%	Z=6.78,p<0.05. HS
H/o Smoking	18	60.00%	12	40.00%	Z=5.28, p<0.05.HS
H/o Diabetes	17	56.66%	13	44.44%	Z=6.1,p<0.05.HS
Obese (BMI>30)	24	80.00%	6	20.00%	Z=5.5, p< 0.05. NS
Wound Infection	19	63.33%	11	37.77%	Z=6.4, p<0.05.HS
Familial Tendencies	22	73.33%	8	27.77%	Z=4.5,p<0.05.HS
Multiple sinus number	25	83.33%	5	17.77%	Z=4.49,p<0.05.HS

The majority of the Patients associated significantly with Risk factors were; Old age i.e. 66.67 %(Z=5.85, p<0.05. HS) followed by Male sex 70.00% (Z=6.78, p<0.05. HS) H/o Smoking 60.00% (Z=5.28, p<0.05.HS), H/o Diabetes 56.66% (Z=6.1,p<0.05.HS), Obese (BMI>30) 80.00% (Z=5.5, p< 0.05. NS), Wound Infection 63.33% (Z=6.4, p<0.05.HS) Familial Tendencies 73.33% (Z=4.5, p<0.05.HS) Multiple sinus number 83.33% (Z=4.49, p<0.05.HS).

DISCUSSION

Pilonidal sinus disease is an acquired condition affecting young adults. A long list of surgeries have been described which itself reflects the need for a safe and efficient surgical method for this entity. Recurrence is the main problem associated with all surgeries described which ranged from 21.4% to 100% for incision and drainage, 5.5%–33% for excision and open packing, 8% for marsupilisation, 3.3%–11% for Z plasty [12,13]. Flap techniques have been associated with lower complication and recurrence rates. With the Limberg flap technique, internal flap cleft can be flattened and tissue can be approximated without tension. In this study, 67 patients with sacrococcygeal pilonidal disease were managed with rhomboid excision and Limberg flap reconstruction. Recurrence was noted in one patient (1.49%). Akin *et al*.[9] operated on 411 patients and reported recurrence rates of 2.91%, so our results were comparable to them. Superficial necrosis was seen in one patient (1.49%), which may be due to the design of the long flap or fault technique. El-khadrawy[14] In our study we have found that Majority of the Patients were in the Age group of >50 i.e. 40.00%, followed by 40-50- 30.00%30-40- 20.00%, 20-30- 6.66%, 10-20- 3.33%.Majority of the patients were Male i.e. 70.00% and Females were 30.00%. The majority of the Patients associated significantly with Risk factors were; Old age i.e. 66.67 %(Z=5.85, p<0.05. HS) followed by Male sex 70.00% (Z=6.78, p<0.05. HS) H/o

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REFERENCES

1. Harlak A, Mentes O, Kilic S, Coskun K, Duman K, Yilmaz F. Sacrococcygeal pilonidal disease: analysis of previously proposed risk factors. Clinics 2010;65(2):125–131
2. Harlak A, Mentes O, Ozer MT, Ersoz N, Coskun AK. Evaluation of history and physical examination data of 587 patients with sacrococcygeal pilonidal disease. Eurasian J Med 2006;38(3):103–106
3. Kaymakcioglu N, Yagci G, Simsek A, Unlu A, Tekin OF, Cetiner S et al. Treatment of pilonidal sinus by phenol application and factors affecting the recurrence. Tech Coloproctol 2005;9(1):21–24
4. Lee HC, Ho YH, Seow CF, Eu KW, Nyam D. Pilonidal disease in Singapore: clinical features and management. Aust N Z J Surg 2000;70(3):196–198
5. Mentes BB, Leventoglu S, Cihan A, Tatlicioglu E, Akin M, Oguz M. Modified Limberg transposition flap for sacrococcygeal pilonidal sinus. Surg Today 2004;34(5):419–423
6. Cihan A, Mentes BB, Tatlicioglu E, Ozmen S, Leventoglu S, Ucan BH. Modified Limberg flap reconstruction compares favorably with primary repair for pilonidal sinus surgery. ANZ J Surg 2004;74(4): 238–242
7. McCallum I, King PM, Bruce J. Healing by primary versus secondary intention after surgical treatment for pilonidal sinus. Cochrane Database Syst Rev 2007 Oct (4):CD006213.
8. Sondenaa K, Andersen E, Nesvik I, Soreide JA. Patient characteristics and symptoms in chronic pilonidal sinus disease.Int J Colorectal Dis 1995 Feb; 10(1):39-42.
9. Akin M, Gokbayir H, Kilic K, Topgul K, Ozdemir E, Ferahkose Z. Rhomboid excision and Limberg flap for managing pilonidal sinus: long-term results in 411 patients. Colorectal Dis 2008 Nov; 10(9):945-8.
10. Aslam MN, Shoaib S, Choudhry AM. Use of Limberg flap for pilonidal sinus-a viable option. J Ayub Med Coll Abbottabad 2009 Oct-Dec; 21(4):31-3.
11. Solla JA, Rothenberger DA. Chronic pilonidal disease.An assessment of 150 cases. Dis Colon Rectum 1990 Sep; 33(9):758-61.
12. Jensen SL, Harling H. Prognosis after simple incision and drainage for a first-episode acute pilonidal abscess. Br J Surg 1988 Jan; 75(1):60-1.
13. Sabet AM, El Shaer WMH, El Amary MK. Definitive treatment of recurrent pilonidal sinus disease using rhomboid excision and Limberg flap. Egypt J Surg 2004 Oct; 23(4):324-7.
14. El-khadrawyOH. The rhomboid flap for recurrent pilonidal disease. Tanta Med Sci J 2006 Oct; 1(4):175-81.

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